REMARKS

Claims 1-23 are currently pending, of which claims 21-23 were previously withdrawn. Claims 1, 13-17 are currently amended. No new matter is added. Reconsideration of the action mailed February 22, 2006, is respectfully requested in light of the foregoing amendments and the following remarks.

The Examiner rejected claims 1-4, 7-13, and 15-20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,694,273 to Kurooka et al. (hereinafter "Kurooka"). The Examiner rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Kurooka in view of U.S. Patent Publication No. 2004/0086274 to Wan et al. (hereinafter "Wan"). The Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Kurooka and Wan in further view of U.S. Patent No. 5,822,094 to O'Sullivan et al. (hereinafter "O'Sullivan"). Applicant respectfully traverses the rejections.

The Examiner has noted that claim 14 is objectionable as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant appreciates the Examiner's identification of allowable subject matter in claim 14.

Section 103 Rejections

Claim 1 stands rejected as unpatentable over Kurooka. Claim 1 is directed to a communications device that includes an optical domain adaptive dispersion compensation module ("OADCM") coupled to an electrical domain adaptive distortion compensation module ("EADCM"). The OADCM is operable to apply a first dispersion compensation to a received signal and the EADCM is operable to apply a second dispersion compensation to the received signal. The communications device also includes a controller coupled to both the OADCM and the EADCM. The controller is operable to selectively control a level of the first and the second dispersion compensation to be applied to the received signal.

The Examiner states that Kurooka discloses the recited controller of claim 1 as controller 35 in FIG. 18. Applicant respectfully disagrees. FIG. 18 illustrates an optical receiving

apparatus for use in a wavelength division multiplexing transmission system. A received optical signal is first compensated for chromatic dispersion using a variable dispersion compensator (which the Examiner states is equivalent to Applicant's OADCM). *See* FIG. 18; col. 23, lines 46-51; col. 25, lines 18-21. A second dispersion compensation is then applied using an equalization amplifier (which the Examiner states is equivalent to Applicant's EADCM) in an optical receiving section. *See* FIG. 18; col. 24, lines 39-63.

FIG. 18 also includes a controller 35, which receives an input signal from the optical receiving section. The input signal provides data regarding the dispersion of the signal following operations performed by the equalization amplifier (i.e., an output signal following both dispersion compensation processes). *See* FIG. 18; col. 24, lines 1-13. The controller 35 can then adjust the compensation provided by the variable dispersion compensator. *See* FIG. 18, col. 24, lines 10-33. Thus, the controller 35 provides a feedback system for adjusting the variable dispersion compensator.

However, Kurooka does not disclose or suggest a controller that is operable to selectively control the dispersion compensation to be applied by both an OADCM and an EADCM, as required by claim 1. The controller 35 does not selectively control both the variable dispersion compensator and the equalization amplifier. As shown in FIG. 18, the only output from the controller 35 travels directly to the variable dispersion compensator. *See* col. 24, lines 25-32. There are no outgoing lines to the equalization amplifier. In contrast, claim 1 requires that the controller be coupled to and operable to selectively control both the OADCM and the EADCM. Furthermore, other implementations of Kurooka showing a similar control circuit (*e.g.*, FIGS. 14 and 17) also fail to show a controller operable to selectively control both an OADCM and an EADCM. Applicant respectfully submits that claim 1, as well as claims 2-12, which depend from claim 1, are in condition for allowance.

Claim 4 stands rejected as unpatentable over Kurooka. Claim 4 is directed to a communications device where the controller controls the EADCM based on feed forward information provided to the controller from the OADCM. The Examiner again cites the controller 35 of FIG. 18 as disclosing the controller of claim 4. Applicant respectfully disagrees.

As discussed above, the controller 35 of FIG. 18 receives input data as the output of the equalization amplifier and as a result provides control adjustments to the variable dispersion compensator. *See* col. 24, lines 25-32. However, in order to provide the features of claim 4, the controller 35 would need to receive input data from the variable dispersion compensator and use that information to control the equalization amplifier, which is the opposite operation of what is disclosed by Kurooka. Kurooka does not disclose or suggest a controller which receives any input from the variable dispersion compensator. Kurooka also does not disclose or suggest providing any control to the equalization amplifier. For at least these additional reasons, claim 4 is in condition for allowance.

Claim 13 stands rejected as unpatentable over Kurooka. Claim 13 is directed to an EADCM that includes a multi-phase eye quality monitor and an equalizer circuit operable to perform dispersion compensation. The multi-phase eye quality monitor is operable to provide signal distortion measurements. Kurooka does not disclose or suggest an electrical domain distortion compensation module that includes a multi-phase eye quality monitor and an equalizer circuit operable to perform dispersion compensation.

The Examiner states that Kurooka discloses the claimed EADCM in FIG. 18 as equalization amplifier having a multi-phase eye quality monitor and equalization circuit. Applicant respectfully disagrees. The Examiner states that an equalization amplified waveform monitor component in FIG. 18 is the claimed multi-phase eye quality monitor and equalization circuit. However, this component is not a component of the equalization amplifier. *See* FIG. 18 elements 5 and 8; col. 11, lines 9-12. Kurooka does not disclose or suggest an EADCM that includes both a multi-phase eye quality monitor for providing signal distortion measurements and an equalizer circuit for performing dispersion compensation. The equalization amplifier of Kurooka does not provide signal distortion measurements. Therefore, the equalization amplifier of Kurooka does not perform the same functions of the EADCM in claim 13, which includes the multi-phase eye quality monitor. Applicant respectfully submits that claim 13, as well as claims 14-16, which depend from claim 13, are in condition for allowance.

Claim 17 stands rejected as unpatentable over Kurooka. Claim 17 is directed to a method that includes measuring signal distortion of an electrical signal having a plurality of channels. The signal distortion measurements are processed to produce at least one control value for one of an optical domain adaptive dispersion compensation module ("OADCM") or an electrical domain adaptive distortion compensation module ("EADCM"). The control value is selectively applied to either the OADCM or the EADCM to provide dispersion compensation to the optical signal.

Kurooka does not disclose or suggest measuring signal distortion and then selectively applying a control signal alternatively to either an OADCM or an EADCM. As discussed above with respect to claim 1, the control circuit disclosed by Kurooka can only provide a control signal to a single compensation device, specifically the variable dispersion compensator. For at least the same reasons as set forth above with respect to claim 1, claim 17 as well as claims 18-20, which depend from claim 17, are in condition for allowance.

Applicant respectfully requests that all pending claims be allowed.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 22 May 2006

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